

PRE-ELEC® PP 1352

Compounded Polypropylene

Premix Oy

Message:

PRE-ELEC® PP 1352 is a dissipative thermoplastic compound based on polypropylene. The electrical dissipation is achieved by using special conductive carbon black. In addition to stable surface resistance between 1e5 to 1e8 ohms, PRE-ELEC® PP 1352 has an excellent balance of mechanical properties and is easy to injection mould. Typical applications include injection moulded dissipative ESD products such as crates, boxes and tote bins.

General Information			
Additive	Carbon Black		
Features	Conductive		
	Good Processability		
Uses	Containers		
	Crates		
Forms	Granules		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.969	g/cm ³	ASTM D792
--	0.980	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	18	g/10 min	ISO 1133
Molding Shrinkage - Flow	1.2 to 1.8	%	ASTM D955, ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240, ISO 868
Shore A	96		
Shore D	71		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield	26.2	MPa	ASTM D638
Yield	26.0	MPa	ISO 527-2
--	17.9	MPa	ASTM D638
4.00 mm	18.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	10	%	
Break, 4.00 mm	30	%	
Flexural Modulus			
4.00 mm	1380	MPa	ASTM D790
4.00 mm	1400	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹			
-20°C	4.2	kJ/m ²	ASTM D256
-20°C	5.0	kJ/m ²	ISO 179
23°C	27	kJ/m ²	ISO 179, ASTM D256
Charpy Unnotched Impact Strength ²			
-20°C	No Break		ASTM D256, ISO 179
23°C	No Break		ISO 179, ASTM D256
Notched Izod Impact (Area)			ASTM D256
-20°C, 4.00 mm	2.10	kJ/m ²	
23°C, 4.00 mm	No Break		
Notched Izod Impact Strength ³			ISO 180
-20°C	3.0	kJ/m ²	
23°C	No Break		
Unnotched Izod Impact (Area)			ASTM D256
-20°C, 4.00 mm	No Break		
23°C, 4.00 mm	No Break		
Unnotched Izod Impact Strength ⁴			ISO 180
-20°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	82.8	°C	ASTM D648B
0.45 MPa, Unannealed	83.0	°C	ISO 75-2/Bf
1.8 MPa, Unannealed	53.9	°C	ASTM D648A
1.8 MPa, Unannealed	54.0	°C	ISO 75-2/Af
Vicat Softening Temperature	150	°C	ISO 306/A50, ASTM D1525 ⁵
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+5 to 1.0E+8	ohms	IEC 61340-2-3
Volume Resistivity	1.0E+3 to 1.0E+7	ohms · cm	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	90.0	°C	
Drying Time	2.0	hr	
Processing (Melt) Temp	200 to 260	°C	
Mold Temperature	60.0 to 80.0	°C	
Injection Pressure	60.0 to 80.0	MPa	
Injection Rate	Moderate		
NOTE			
1.	4 mm thickness		
2.	4 mm thickness		
3.	4 mm thickness		

4.	4 mm thickness
5.	Rate A (50°C/h), Loading 2 (50 N)

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